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| 09/678,579 | 10/03/2000 | Daniel A. Japuntich | 48317USA3H.027 | 7369 |

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EXAMINER

LEWIS, AARON J

ART UNIT

PAPER NUMBER

3761

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/678,579

Applicant(s)
DANIEL A. JAPUNTICH ET AL.

Examiner
AARON J. LEWIS

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- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 2, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-71 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Double Patenting

1. Claims 33-71 of this application continue to conflict with claims 34-44 of Application No. 08/240,877; 34-77 of 09/440,619; 33-58,60-67 of 09/678,580; 33-54,56-61 of 09/678,488; 33-54,56 of 09/677,637; 33-36,38-62,64-66 of 09/677,636. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 33-56,63-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al.('516) in view of McKim ('618), for the reasons set forth on pages 2-6 of the Office action dated 07/06/01.

As to claim 63, Simpson et al. as modified by McKim as discussed above with respect to claim 33, also teach the flexible flap being positioned on the valve seat such that the flap is

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pressed towards the seal surface in an abutting relationship therewith when a fluid is not passing through the orifice (page 2, lines 39-42 of Simpson et al. which expressly discloses that the valve flap (13) of fig. 2 is arranged to cover the orifice during inhalation). Since inhaled air enters the interior of the mask (fig. 1) through the filter material of the body of the mask and exhaled air exits the interior of the mask of Simpson et al. via the exhalation valve (fig. 2), there is no fluid is passing through the orifice (16) during inhalation. Therefore, the exhalation valve body is pressed towards the seal surface in an abutting relationship when (during inhalation) fluid is not passing through the orifice (16).

As to claims 64 and 65, the particular material from which the valve seat of Simpson et al. is made and the manner of making the valve seat can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular material nor in the manner of making the seat. It is noted that Simpson et al. (page 2, line 39) discloses that the valve flap being made from a plastic material. It is submitted that it would have been obvious to make the valve seat from any well known material including plastic by any well known method including injection molding because it (the valve seat) would physically cooperate more effectively with a valve flap of the same material than one made from a different material.

As to claims 66-69, McKim (fig. 3) teaches a valve seat which includes a planar flap retaining surface that has two securement points associated therewith, the flap retaining surface also being positioned on the valve seat to allow the flap to be pressed in an abutting relationship to the seal surface when fluid is not passing through the orifice (col. 1, lines 60-72 and col. 2, lines 23-28).

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4. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al. in view of McKim as applied to claims 33-56,63-69 above, and further in view of Shindel ('277).

The difference between Simpson et al. and claim 57 is the inclusion of a valve cover, the flexible flap being held in position on the valve seat by mechanical means.

Shindel (col.2, lines 59-66) teaches a valve securing device in the form of a valve cover (7) that is disposed over the valve seat and that comprises a surface (14) that mechanically holds flexible flap (6) against the flap retaining surface (5). Shindel cites the advantages of simplicity of arrangement and ready removability of the cover when desired which would allow for replacement and/or cleaning of the valve and orifices.

It would have been obvious to modify the manner of attachment of the exhalation valve of Simpson et al. to employ a cover over the valve seat because it would have provided a simple arrangement with ready removability of the cover when desired and because it would have provided protection for the exhalation valve as taught by Shindel.

5. Claims 58-62,70,71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al. in view of McKim as applied to claims 33-56,63-69 and further in view of Warbasse ('706) and Braun ('362).

The differences between Simpson et al. and claim 58 are a valve cover having a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end and cross members that are disposed within the opening of the valve cover.

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Warbasse teaches a valve cover (11) having a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end for the purposes of protecting the valve flap (12), controlling the extent of movement of the valve flap, and controlling the direction of fluid flow exiting the mask via the valve.

It would have been obvious to modify the valve (fig.2) of Simpson et al. to provide a valve cover because it would have provided a means for protecting the valve flap (12), controlling the extent of movement of the valve flap, and controlling the direction of fluid flow exiting the mask via the valve as taught by Warbasse.

Braun, in an exhalation valve for a filtering face mask, teaches cross members (19,20) which are slightly recessed beneath the seal surface (18) for the purpose of increasing the sealing force (col.4, lines 36-41) and cross members (25) that are disposed within the opening of the valve cover for the purpose of protecting the valve against debris (col.4, lines 25-26).

It would have been obvious to modify the cross members of Simpson et al. (structure through which openings 16 extend) to recess them slightly beneath the seal surface because it would have provided a increased sealing force as taught by Braun.

As to claim 59, Warbasse teach a valve cover (11 of fig.2) having an opening in the valve cover which is approximately parallel to the path traced by the second end of the flexible flap during its opening and closing.

As to claim 60, Simpson et al. as further modified by Warbasse teach a cover which directs exhaled downwards when the mask is worn by a person.

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As to claim 61, the cover (#11 of figs.2 and 3) of Warbasse shows fluid impermeable sidewalls.

As to claim 62, the opening in the cover of Simpson et al. as modified by Warbasse is at least the size of the orifice in the valve seat as illustrated in figs.3 and 4 of Simpson et al..

As to claim 70, the valve seat of Simpson et al. as modified by McKim and as further modified by Braun teaches a valve seat including a seal ridge (18 of Braun), onto which a seal surface is disposed, and a flap retaining surface, onto which the two securement points are located, the flap retaining surface being positioned on the valve seat to allow the flap to be pressed in an abutting relationship to the seal surface when a fluid is not passing through the valve (as discussed above with respect to claim 63 and with respect to claims 66-69).

As to claim 71, the two securement points of Simpson et al. as modified by McKim are located outside a region encompassed by the orifice (see fig.3 of McKim and fig.2 of Simpson et al.).

Response to Arguments

6. Applicant's arguments with respect to claims 58-62 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed 10/15/01 regarding claims 33-57,63-71 have been fully considered but they are not persuasive.

Applicant's arguments hinge on speculation of a possibility that valve flap (15) of Simpson et al. might "droop" away from the valve seat. There is no support in the disclosure of Simpson et al. which forms a basis for such a position. The mask body of Simpson et al. (fig.1) is disclosed as

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filtering inhaled air and releasing exhaled air through exhalation valve (fig.2). The mask of Simpson et al. is disclosed as being worn by persons in which the ambient atmosphere contains gaseous or vaporous contaminants (page 1, lines 24-28). In order for the mask of Simpson et al. to function as it is intended (and there is no reason to even suspect that it does not), the exhalation valve (fig.2) must remain closed until a wearer exhales; otherwise, gaseous or vaporous contaminants would leak into the interior of the mask body and be inhaled by such a wearer.

Applicant is reminded that the language of each of claims 33 and 63 requires only that the valve flap be pressed towards the seal surface in an abutting relationship therewith when a fluid is not passing through the orifice. As discussed above with respect to claim 33, Simpson et al. teach such an arrangement during a wearer's inhalation period. That is, even if the valve flap (15) of Simpson et al. were to "droop" away from its seat during a period of time when a wearer is neither inhaling nor exhaling, there is at least a time period (i.e. inhalation) during which no fluid is flowing through orifice (16) simultaneous with the valve flap (15) being pressed in an abutting relationship with the valve seat.

The Castiglione Affidavit is based upon the stated assertion (e.g. page 2, paragraph #9) that the valve flap (15) is not pressed into abutting relationship with the valve seat when a wearer is neither inhaling nor exhaling. While such may be the case, there is no objective evidence (e.g. a physical test of the mask disclosed by Simpson et al.) to support such a conclusion. Consequently, the affidavit is not persuasive.

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8. Applicant's arguments filed 04/02/2002 have been fully considered but they are not persuasive.

Applicant's arguments regarding the propriety of the combination of prior art to Simpson et al. and McKim are disagreed with. Inasmuch as the valve flap of McKim lifts from the valve seat responsive to the pressure of the fluid passing therethrough and reseats due to its resilience, it does exhibit flexibility. Applicant's arguments alleging that one of ordinary skill would not consult reed valves for high speed engines may be accurate; however, the fact that McKim teaches the mounting of a valve flap in a curved orientation for the expressed purpose of increasing the efficiency of the seal between the valve flap and valve seat is seen as relevant information to one of ordinary skill in the creation of a more efficient seal between a valve and seat in any environment including the environment of valves in the respiratory arts.

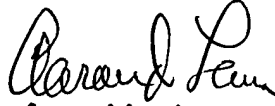
9. Applicant's arguments with respect to claims 57-62 have been considered but are moot in view of the new ground(s) of rejection.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Copies of all prior art references listed on the accompanying PTO-892 have been provided with the Office action in copending application 09/678,580.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron J. Lewis whose telephone number is (703) 308-0716.

Aaron J. Lewis

June 15, 2002


Aaron J. Lewis
Primary Examiner